

ABSTRACT OF THE INVENTION

The invention provides a renewable composite filter media for removal of particles from a fluid stream comprising a membrane filtration layer comprising a porous polymeric membrane having an upstream side and a downstream side relative to the direction of fluid flow, a first depth filtration media layer having an upstream side and a downstream side relative to the direction of fluid flow, the first depth filtration media layer being disposed on upstream side of the membrane filtration layer; and at least one additional depth filtration media layer removably attached to the upstream side of the first depth filtration media layer. In this aspect, the first depth filtration media layer may be removably attached to the membrane filtration layer.